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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,128	01/22/2004	Brant D. Nystrom	2003-0485.02	6187

21972 7590 05/24/2007  
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EXAMINER
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ABDI, AMARA

ART UNIT	PAPER NUMBER
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2609

MAIL DATE	DELIVERY MODE
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05/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,128	<b>Applicant(s)</b> NYSTROM ET AL.	
	<b>Examiner</b> Amara Abdi	<b>Art Unit</b> 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/22/2004</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **168** in figure **12** is not mentioned in the specification

**185** in figure **13** is not mentioned in the specification

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

(1) On page 1, paragraph [0001], The examiner suggests filing the correct application number instead of <xxxx> in the specification if appropriate.

(2) Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

- The Abstract is objected to because it has less than 50 words.

Appropriate correction is required.

### ***Claim Objections***

3. Claim 2 is objected to because of the following informalities:

(1) Claim 2, line 1, "a control" should be changed to "**the** control".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7-9 recite the limitation "the first control parameter". There is insufficient antecedent basis for the limitation in the claims. The "first control parameter" is not introduced before.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Paik et al. (US 6,163,621).

Paik et al. disclose a method of processing an image, the method comprising:  
capturing an image of an object (column 8, line 49-56); and

applying controlled, equalization to an image generated by the image capture device (column 10, line 6-16), where the controlled, histogram equalization uses a concentration ratio (column 4, line 64; and column 9, line 43).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1,4-6,10,14-16,20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussman et al. (US 5,686,960) in view of Charpentier (US-PGPUB 2004/0119233).

**(1) Regarding claims 1,10, and 24:**

Sussman et al. disclose a moving-window, histogram equalization method of processing images (column 25, line 44-47), system (column 2, line 40-41), and computer program (column 6, line 26-30), the method comprising:

breaking the image into a plurality of tiles (column 6, line 39-41); and

processing each of the plurality of tiles by (column 5, line 59-60), (the examiner interpreted that the image processor is processing the plurality of tiles)

obtaining a control parameter (column 27, line 35-37);

determining a histogram for one of the plurality of tiles (column 9, line 21-23), (the examiner interpreted the determining of histogram as determining of a histogram area).

determining an area of the image that includes the one of the plurality of tiles and information outside the one of the plurality of tiles (column 10, line 15-18);

creating a first output by performing a histogram equalization on the area (column 9, line 21-23);

creating a second output based on the control parameter and the first output (column 15, line 64-67); and

using the second output to process the one of the plurality of tiles (column 16-line 1-3).

However, Sussman et al. does not disclose the determining of a ratio for the one of the plurality of tiles as recited in claims 1,10, and 24.

Chapentier teaches a word game and method of play, where the ratio of the one of plurality of tiles is determined (paragraph [0045], line 8-12).

One of ordinary skill in the art would have clearly recognized the determining of the ratio of the one of plurality of tiles (paragraph [0045], line 4-12). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Chapentier, where determining the ratio of one of the plurality of tiles, in the system of Sussman et al., because such feature creates a game suitable for children, in which a player is required to match randomly selected letter tiles with the corresponding letters within words (paragraph [0007], line 9-13), as well as providing a method for playing a word game, which is designed for the enjoyment and education of children by incorporating the identification skills, together with their imagination enabling the formation of words (paragraph [0008], line 5-7).

**(2) Regarding claims 4 and 14:**

Sussman et al. further disclose the method, and system (column 2, line 40-41), where the area includes the one of the plurality of tiles (column 10, line 17-18), (the examiner interpreted that the tiles are included in the area) and one or more portions of other tiles in the plurality of tiles (column 24, line 50-53), (the examiner interpreted that the portion of tiles are included in the subdivided areas).

**(3) Regarding claims 5 and 15:**

Sussman et al. further disclose the method, and system (column 2, line 40-41), where obtaining the first control parameter includes obtaining a control parameter from a user (column 44, line 57-60), (the examiner interpreted the removing of the undesirable motion blur from the real time image by the user includes the control parameter).

**(4) Regarding claims 6 and 16:**

Sussman et al. further disclose the method, and system (column 2, line 40-41), where determining a concentration ratio for the one of the plurality of tiles includes scaling a concentration ratio value (column 26, line 25-34).

**(5) Regarding claim 20:**

Sussman et al. disclose all the subject matter as described in claims 1 and 10 above.

Furthermore, Sussman et al. disclose an image capture device operable to output an image (column 5, line 36-40).

However, Sussman et al. does not disclose the determining of a ratio for the one of the plurality of tiles as recited in claim 20.

Chapentier teaches a word game and method of play, where the ratio of the one of plurality of tiles is determined (paragraph [0045], line 8-12).

One of ordinary skill in the art would have clearly recognized the determining of the ratio of the one of plurality of tiles (paragraph [0045], line 4-12). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine



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the system of Chapentier, where determining the ratio of one of the plurality of tiles, in the system of Sussman et al., because such feature creates a game suitable for children, in which a player is required to match randomly selected letter tiles with the corresponding letters within words (paragraph [0007], line 9-13), as well as providing a method for playing a word game, which is designed for the enjoyment and education of children by incorporating the identification skills, together with their imagination enabling the formation of words (paragraph [0008], line 5-7).

6. Claims 2,7-9, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussman et al and Charpentier, as applied to claim 1 above, and further in view of Kim (US 6,078,686).

**(1) Regarding claim 2:**

Sussman et al. and Charpentier disclose all the subject matter as described in claim 1 above.

However, Sussman et al. and Charpentier do not disclose the method, where processing the first control parameter and the ratio to obtain a second control parameter as recited in claim 2.

Kim teaches an image quality enhancement circuit and method therefore, where processing the first control parameter (column 8, line 21-22) and the ratio (column 15, line 36) to obtain a second control parameter (column 8, line 18-20).

One of ordinary skill in the art would have clearly recognized the processing of a first control parameter (column 8, line 21-22) and the ratio (column 15, line 36-37) to

obtain a second control parameter (column 8, line 18-20). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kim, where processing the first control parameter and ratio to obtain a second control parameter, in the system of Sussman et al., because such feature provides an image quality enhancing method having such function noise reduction, contrast enhancement based on mean separation histogram equalization, local contrast enhancement, and color compensation (column 2 line 29-32).

**(2) Regarding claims 7 and 17:**

Sussman et al. and Charpentier disclose all the subject matter as described in claims 1 and 6 above.

However, Sussman et al. and Charpentier do not disclose the determining of mathematical root of the group of the first control parameter, the concentration ratio, or both as recited in claims 7 and 17.

Kim teaches an image quality enhancement circuit and method therefore, where determining of mathematical root by the gain feature determiner, to restrict the enhancement of the input signal (column 12, line 4-5)

One of ordinary skill in the art would have clearly recognized the determining of mathematical root of the group of the first control parameter, the concentration ratio, or both (column 11, line 66-67; and column 12, line 1-8). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kim, where determining the mathematical roots, in the system of Sussman et al., because such feature provides an image quality enhancing method having such

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function noise reduction, contrast enhancement based on mean separation histogram equalization, local contrast enhancement, and color compensation (column 2 line 29-32).

**(3) Regarding claims 8 and 18:**

Sussman et al. and Charpentier disclose all the subject matter as described in claims 1 and 6 above.

However, Sussman et al. and Charpentier do not disclose the multiplying of one of the groups of the first parameter, the concentration ratio, or both by a number as recited in claims 8 and 18.

Kim teaches an image quality enhancement circuit and method therefore, where multiplying the value of the maximum bounding function output by the gain feature determiner (column 12, line 21-23).

One of ordinary skill in the art would have clearly recognized the multiplying of one of the groups of the first parameter, the concentration ratio, or both by a number (column 12, line 21-30). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kim, where determining the mathematical roots, in the system of Sussman et al., because such feature provides an image quality enhancing method having such function noise reduction, contrast enhancement based on mean separation histogram equalization, local contrast enhancement, and color compensation (column 2 line 29-32).

**(4) Regarding claims 9 and 19:**

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Sussman et al. and Charpentier disclose all the subject matter as described in claims 1 and 6 above.

However, Sussman et al. and Charpentier do not disclose the combining of the first control parameter and the concentration ratio as recited in claims 9 and 19.

Kim teaches an image quality enhancement circuit and method therefore, where combining the gain control function with the mean separate histogram equalization (column 4, line 51-53), (the examiner interpreted that the histogram equalization includes the concentration ratio).

One of ordinary skill in the art would have clearly recognized the combining of the first control parameter and the concentration ratio (column 4, line 47-56). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Kim, where combining the first control parameter and the concentration ratio, in the system of Sussman et al., because such feature provides an image quality enhancing method having such function noise reduction, contrast enhancement based on mean separation histogram equalization, local contrast enhancement, and color compensation (column 2 line 29-32).

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussman et al. and Charpentier, as applied to claims 1,10, and 24 above, and further in view of Sawada et al. (US 7,023,582).

Sussman et al. and Charpentier disclose all the subject matter as described in claims 1,10, and 24 above.

However, Sussman et al. and Charpentier do not disclose the method, where creating a first output includes creating a first lookup table, and creating the second output includes creating a second lookup table as recited in claims 3 and 13.

Sawada et al. teaches an image processing apparatus, where the first output is created (column 4, line 10), (the examiner interpreted the generating of the first address as creating of the first output) including creating of the first lookup table (column 4, line 9-12), and the creating of the second output (column 4, line 17), (the examiner interpreted the generating of the second address as creating of the second output) including creating second lookup table (column 4, line 15-17).

One of ordinary skill in the art would have clearly recognized the creating of a first output includes creating a first lookup table (column 4, line 34-38), and creating the second output includes creating a second lookup table (column 4, line 40-46). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Sawada et al., where the first lookup table and the second lookup table are created, in the system of Sussman et al., because such feature provides an image processing apparatus which compatibility of proper gray reproduction and high chroma color representation, proper black reproduction of a photograph portion, reproduction of a black character, and elimination of instability of dark color reproduction can be realize (column 1, line 66-67; and column 2, line 1-3).

7. Claims 11-12 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussman et al. and Charpentier, as applied to claims 1,10 and 20 above, and further in view of Hannah (US 5,859,710).

**(1) Regarding claims 11 and 21:**

Sussman et al. disclose all the subject matter as described in claim 10 above.

However, Sussman et al. does not disclose the system, where the printer is coupled to the processor as described in claims 11 and 21.

Hannah teaches a digital copying system using a high-speed data bus without the use of data buffer, where the printer is coupled to the processor (column 3, line 14-16).

One of ordinary skill in the art would have clearly recognized the coupling of the printer to the processor (column 5, line 17-23). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Hannah, where the printer is coupled to the processor, in the system of Sussman et al., because such feature enables the transmission of the digital image signal from the external processor to the printer for rendering the digital image signals onto the physical medium without prior interim storage of the digital image signals in a buffer on board the printer (column 3, line 22-26).

**(2) Regarding claims 12 and 22:**

Sussman et al. disclose all the subject matter as described in claim 10 above.

However, Sussman et al. does not disclose the system, where the image capture device is coupled to the processor as recited in claims 12 and 22.

Hannah teaches a digital copying system using a high-speed data bus without the use of data buffer, where the image capture device is coupled to the processor.

One of ordinary skill in the art would have clearly recognized the coupling of the capture device to the processor. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to combine the system of Hannah, where the image capture device is coupled to the processor, in the system of Sussman et al., because such feature enables the transmission of the digital image signal from the external processor to the printer for rendering the digital image signals onto the physical medium without prior interim storage of the digital image signals in a buffer on board the printer (column 3, line 22-26).

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Von Behren et al. (US 6,558,324) disclose a system and method for strain image display.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571) 270-1670. The examiner can normally be reached on Monday through Friday 7:30 Am to 5:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amara Abdi  
05/17/2007



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